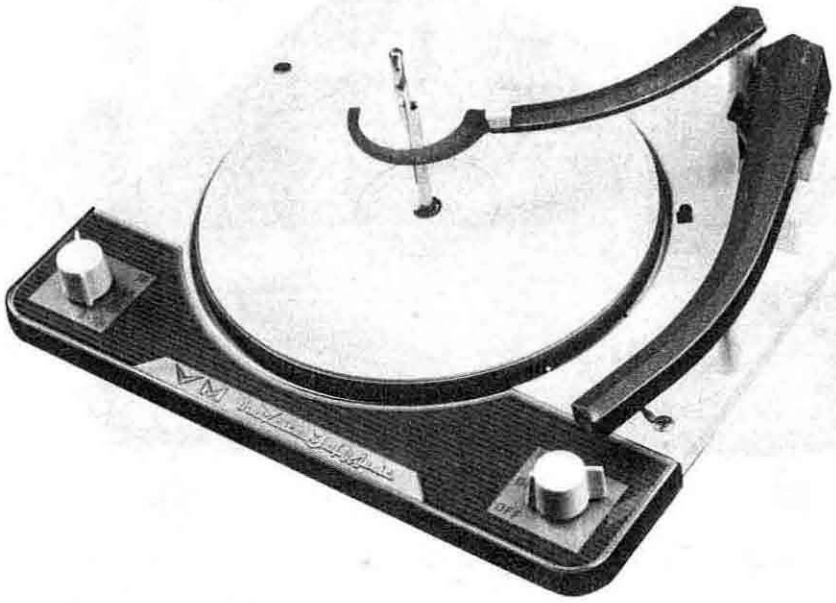
the Voice of Music



SERVICE MANUAL and PARTS LIST

for

V-M MODELS 1200, 1200A

RECORD CHANGER

★

V-M CORPORATION
BENTON HARBOR, MICHIGAN

Form No. 17067

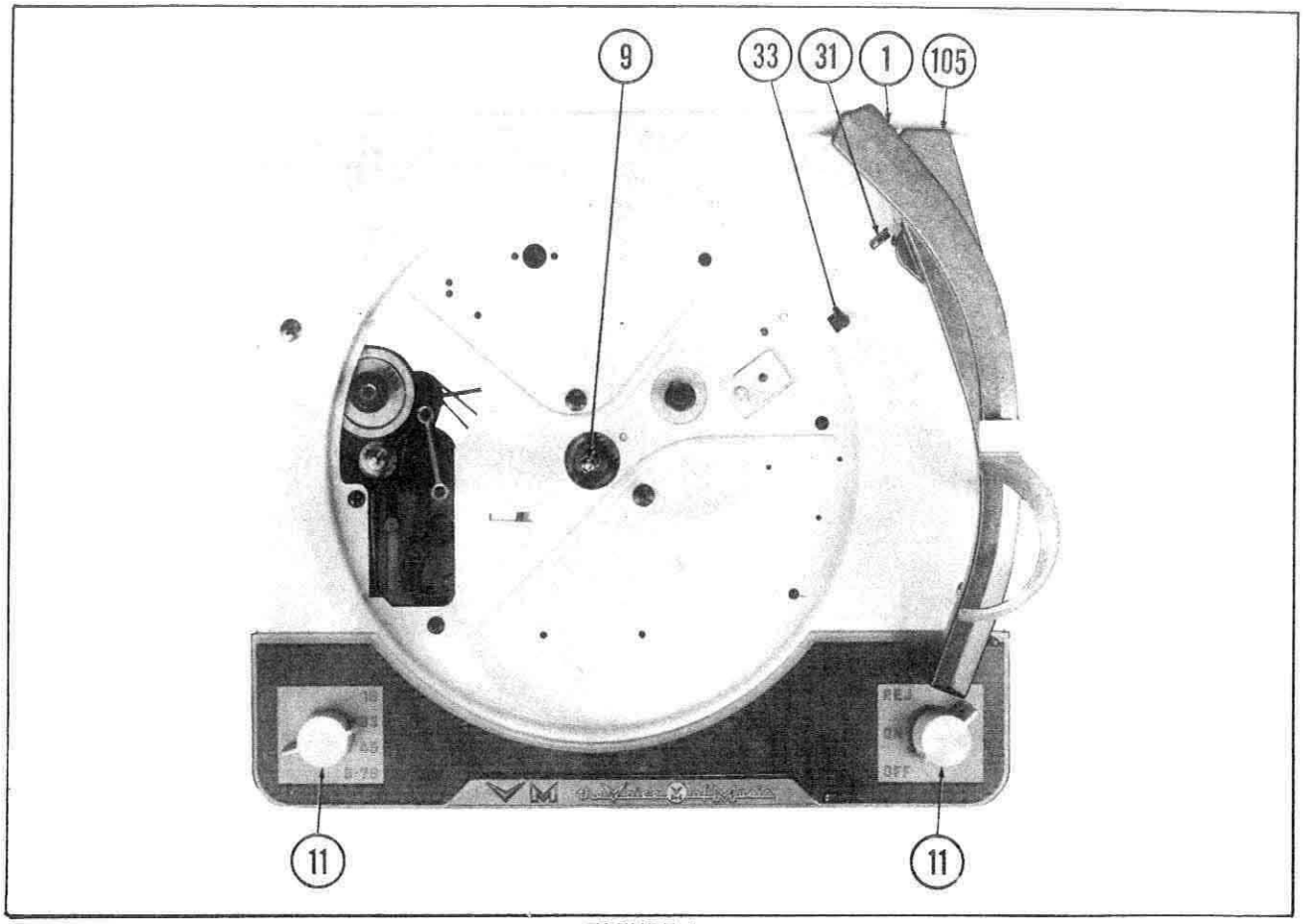


FIGURE 1

CONTROLS

Two controls are provided on the baseplate, one on the right front corner and one on the left front corner.

The right-hand control is the Off-On-Reject control. Turning this control to the center or "On" position energizes the motor and starts the turntable, when turned to the right (clockwise) to the "Rej." position it starts the mechanism into complete automatic operation. The mechanism will shut off automatically after the last record has been played but can be shut off manually by turning this control to the left (counter-clockwise).

The left hand control is the speed control. It has four normal positions, "16", "33", "45", and "S78" to select the turntable speed desired. This control should be turned to the "S-78" position if the changer is not expected to be in use for an extended period of time.

PREPARING FOR OPERATION

Shipping Bolts —

Before placing in operation, the changer must be floating freely on the mounting springs. To float the changer, turn the two shipping bolts in a clockwise direction as far as they will go.

Leveling Record Changer-

It is essential to have the record changer absolutely level. Use a torpedo or similar type level on the record changer baseplate. Use adequate shims to level the record changer pan or combination cabinet to achieve perfect level.

OPERATING INSTRUCTIONS

Loading-

1. Pull straight up on record support knob (2) until record support clears spindles, swing support out over pick-up arm.

2. Place records on spindle and lower to offset shelf. Hold records level and replace record support over spindle.

Starting-

To start the changer, after checking that the stylus and speed controls are in the position corresponding to type records to be played, turn "Off-On-Rej." knob to "Rej." and release. The changer will operate automatically until the last record has been played, at which time, the pick-up arm is returned to its rest and the supply to the motor is switched off.

Rejecting-

To reject a record at any time while the changer is operating, turn "Off-On-Ref." knob to "Rej." and release.

Stopping-

The changer may be stopped any time a record is playing by turning changer control knob to "Off". Lift pick-up arm and place on rest.

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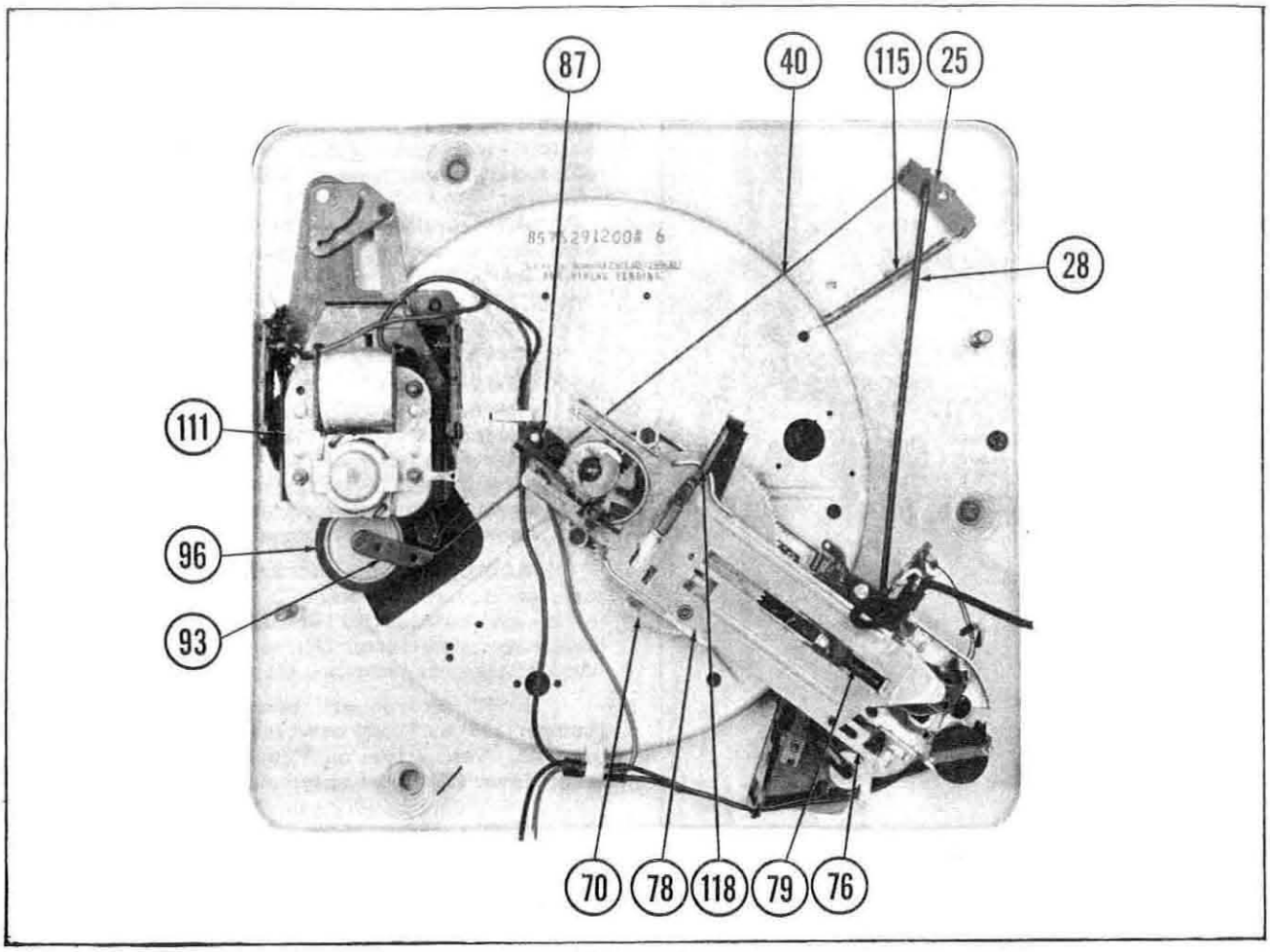


FIGURE 2

Unloading-

Lift record support clear of spindle and swing out over pick-up arm. Using both hands, with fingers under the edge of bottom record, lift records straight up and off spindle.

Manual Operation-

Records that do not have starting and fast-finishing grooves must be played manually. To play records manually, lift the records support arm and swing to the right until clear of the turntable. Place record on spindle and lower to spindle shelf. Tilt record down toward left front of baseplate and lower to turntable. Turn changer control knob to "On" position only. Gently place needle on record.

Repeating Of 7", 10", Or 12" Records-

To repeat a record, swing record support clear of turntable, place record on turntable and start changer. Record repeats until controls is turned "Off". If a 12" record is repeated, wait for the changer to finish cycling and reposition the pick-up arm manually to the 12" position.

CHANGE CYCLE

It is recommended that the change cycle operation be observed by rotating the turntable by hand. The action described below can then be readily followed and the function of each part more easily understood.

This changer is provided with what is known as velocity trip mechanism. The change cycle is started by the faster inward motion of the pick-up arm when the needle enters the trip grooves at the end of the record. Only records having fast-finishing grooves will operate this trip.

The pick-up arm and hinge assembly, and trip finger cam and shaft assembly (49) are secured together so that they move in unison, as the pick-up arm nears the end of a record, trip finger cam (49) pushes trip link (76), which, in turn, engages and pivots trip lever (75). As trip lever (75) pivots, pawl lever (73) pivots with it carries the trip pawl toward the hub on the turntable. While a record is playing, the small motions of the trip pawl are not sufficient to cycle the mechanism because on each revolution of the turntable the wiping contact by the hub projection moves the trip pawl back to clear the projection.

In the first revolution of the turntable during which the pick-up arm advances rapidly, the trip pawl is moved far enough to definitely engage the projection on the turntable hub. The contact between the trip pawl and the turntable hub projection gives the necessary push for the teeth in main gear (70) to engage the teeth in the turntable hub, thus causing main gear (70) to rotate. This in turn, starts the lateral travel of the slide assembly (78). The slide assembly (78) moves to the rear thru the action on an eccentric mounted pin on main gear (70), which rides in the cross slot on the slide assembly (78).

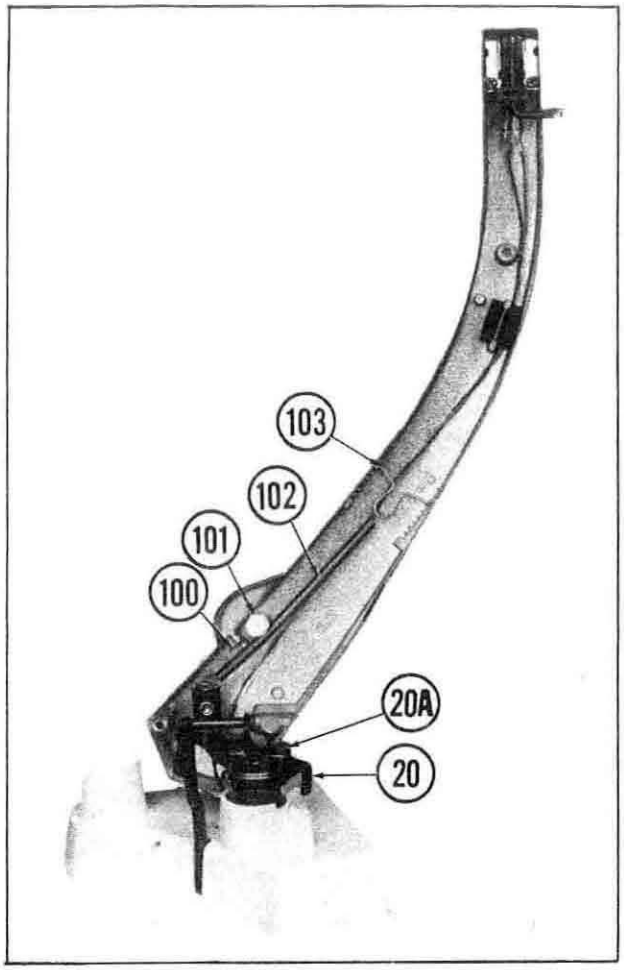


FIGURE 3

As the slide assembly begins to move, the cam surface on the rear of the slide pushes lift pin (19) upward, raising the pick-up arm clear of the record. At the same time, trip finger cam (49) is pushed up by the force transferred through lift pin spring (51). The raising of trip finger cam (49) causes the two formed dimples in the trip finger cam to engage the two holes in the pick-up arm return located (45), and couple them together. This directs the movement of the pick-up arm during the change cycle.

Slide assembly (78) continues to move away from the centerpost until the formed end of slide (78) pushes against the pick-up arm return locator (45). This relieves the force of pick-up arm return locator (45) against shut-off lever assembly (66), permitting shutoff lever spring (65) to return the shutoff lever (66) to the normal (raised) position.

After cycling slide (78) has raised the pick-up arm and is moving it outward, the tab on front of slide assembly (78) contacts the ejector bracket assembly (87). Ejector bracket (87) moves push rod (56) upward, actuating spindle assembly (9), to drop a record to the turntable.

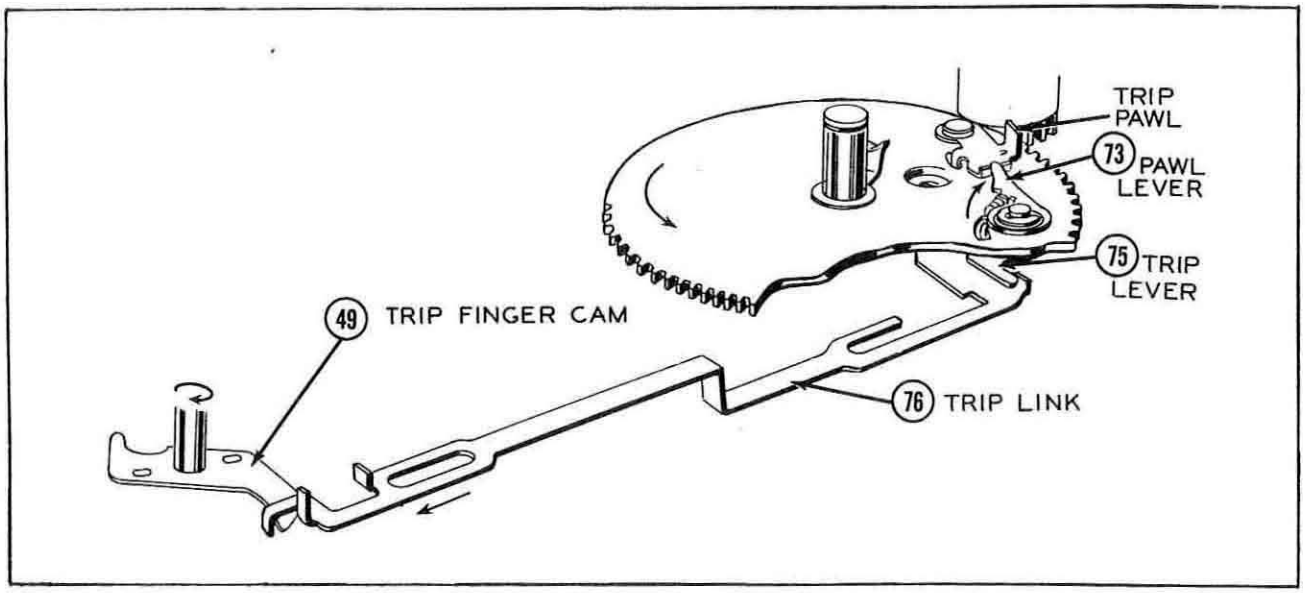
Simultaneously, the trip pawl on top of main gear (70) contacts and rides along the curved finger of the muting switch bracket assembly (67). This action moves the trip pawl and its associated levers into a neutral position. This prevents the trip pawl from re-engaging with the projection on the turntable hub which would start a new change cycle.

At this time, the cam surface of the bracket located on top of main gear (70) moves reset lever (61) to its mid-position (10" set-down) where it is held by the 12" record selector (31). Slide assembly (78) continues to the rear and then starts forward.

If 7" records are being changed, the rubber bumper (33) on 7" set down lever (58) is free to move upward. This action on 7" set-down lever (58) raise reset lever (61) to the upper position (7 set-down).

If 10" records are being changed, the 7" set-down lever (58) will not operate as the rubber bumper (33) will contact the edge of the 10" record and reset lever (61) will remain in the mid-position (10" set-down) as originally placed by the caming action of the bracket on top of main gear (70).

When a 12" record drops to the turntable, it strikes the 12" record selector (31) and forces it backward. This disengages the end of reset lever (61) from the edge of the 12" record selector (31) and permits the reset lever (61) to drop down into the recess at the bottom of the 12" record selector (31). This position of the reset lever (61) causes it to engage the bottom step of the pick-up arm return locator (45) and will push the pick-up arm to land on the edge of a 12" record.



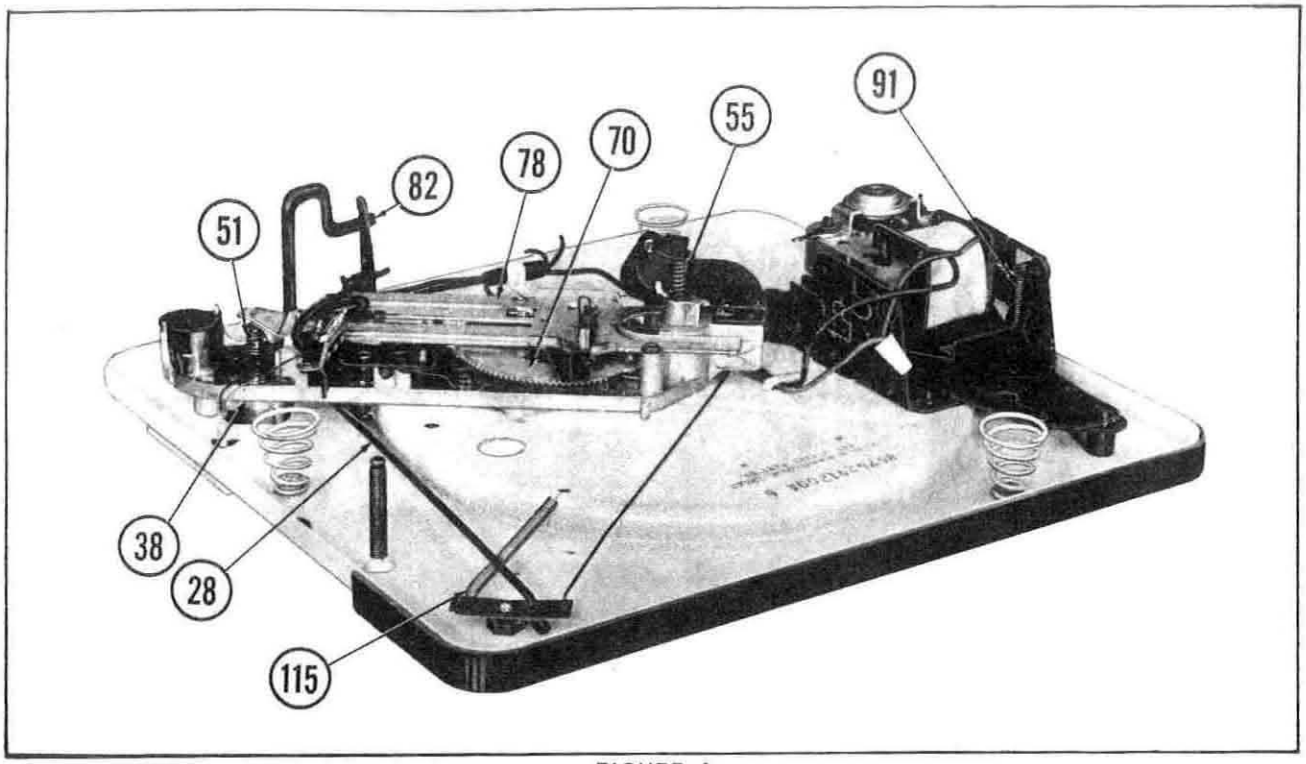


FIGURE 4

As the slide assembly (78) continues forward, the tab on the rear of the slide moves clear of the pick-up arm return locator (45) and the trip finger cam (49), which are still locked together. This action permits the pick-up arm return spring (43) to move the pick-up arm inward until one of the three set-down steps in the pick-up arm return locator (45) strike the reset lever (61), which has been positioned by the record being changed (see above). This stops the inward movement of the pick-up arm directly above the point of landing. The pick-up arm is then lowered to the lead-in groove of the record as the lift pin (19) rides down the incline on the rear of the slide assembly (78). As the pressure is released from lift pin spring (51), trip finger cam (49) and pick-up arm return locator (45) separate. This permits the pick-up arm to move freely across the record.

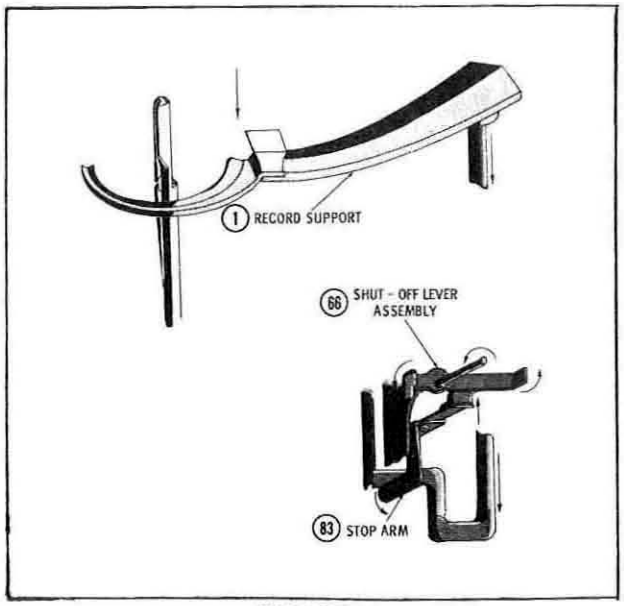


FIGURE 5

After the mechanism has been tripped it again follows the preceding sequence of cycling and playing the records until the last record of the stack has been played.

As the last record of the stack drops to the turntable the record support (1) drops below the shelf on the spindle assembly (9) and the lower end of record support shaft (82) contacts the stop arm on the record support guide assembly (83). This stop arm in turn applies force to shut-off lever (66). At this moment the cycling slide (78) is in the outermost position (away from center-post) and the end of the shut-off lever (66) is forced against the escape lever (78A) which prevents it from lowering further.

As the cycling slide (78) returns to the out of cycle position the end of shut-off lever (66) slides off the escape lever (78A) permitting the end to extend down through the slot in the cycling slide. At this time the pick-up arm has rotated too far to be blocked by the other end of the shut-off lever (66) and the pick-up is permitted to land on the record.

After the lost record has been played the mechanism again goes into change cycle, and the cycling slide (78) moves into its outermost position. At this moment the force which has been applied to the shut-off lever (66) from the record support shaft (82) causes the end of shut-off lever (66) to lower, thus extending further through the slot in cycling slide (78). The other end of shut-off lever (66) raises and blocks the pick-up arm return locator (45) which at this moment is held back by the cycling slide (78).

As the cycling slide (78) moves back toward the centerpost, it carries the raised trip link (76) along until finally the formed end of the trip link (76) pushes control lever (41) which in turn actuates power switch (42). This removes power from the motor and the mechanism stops.

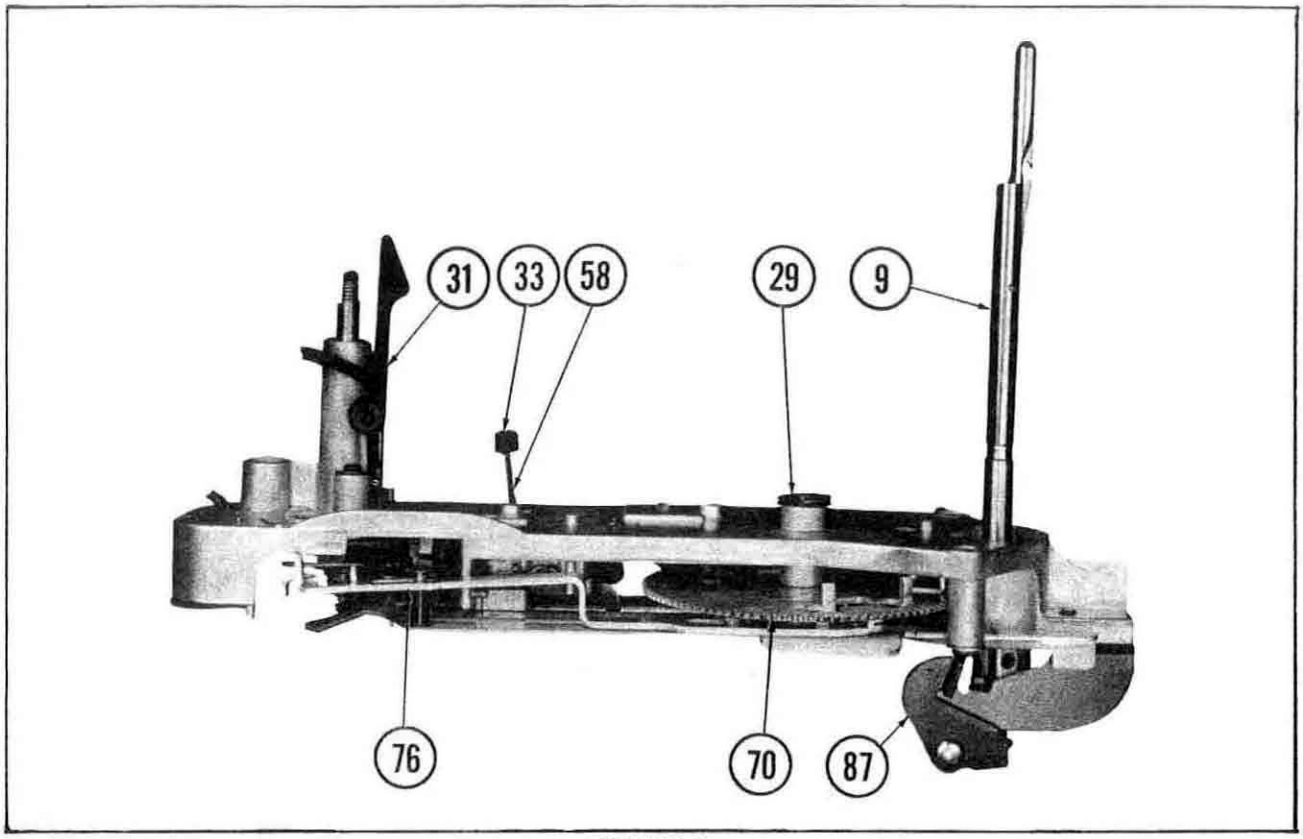


FIGURE 6

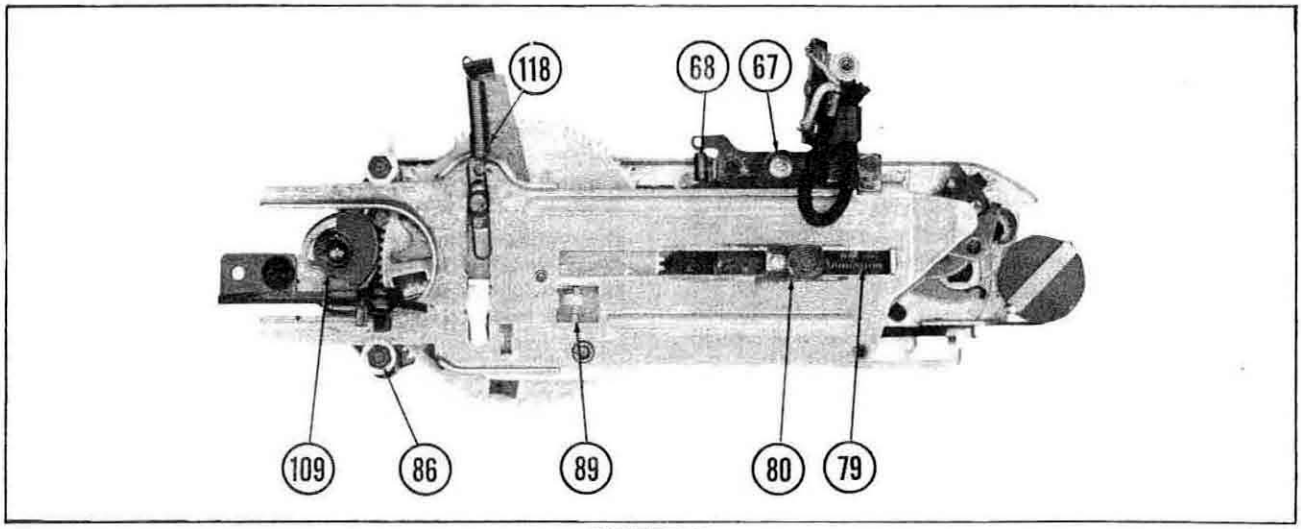


FIGURE 7

As the slide assembly moves to the out of cycle position, lift pin 19 rides down the incline and lowers the pick-up arm to the rest post (23).

LUBRICATION

Additional lubrication should not be required for the life of the changer, but in cases of unusual use or high operating temperature, the changer should be lubricated as follows: (Refer to the exploded view).

Apply Andok "B" or Texaco Sta-Put to:

1. Edges of all slots in slide assembly (78).

2. Outer edges of times on forked end of slide assembly (78).

3. Lift pin cam surface on slide assembly (78).

4. Lower surfaces of pick-up arm return locator (45).

5. Inner surface of tab on rear of slide assembly (78).

Apply a small quantity of light mineral oil to:

1. Trip finger cam shaft (49).

ADJUSTMENTS

Needle Set-Down (Refer To Figure 3)-

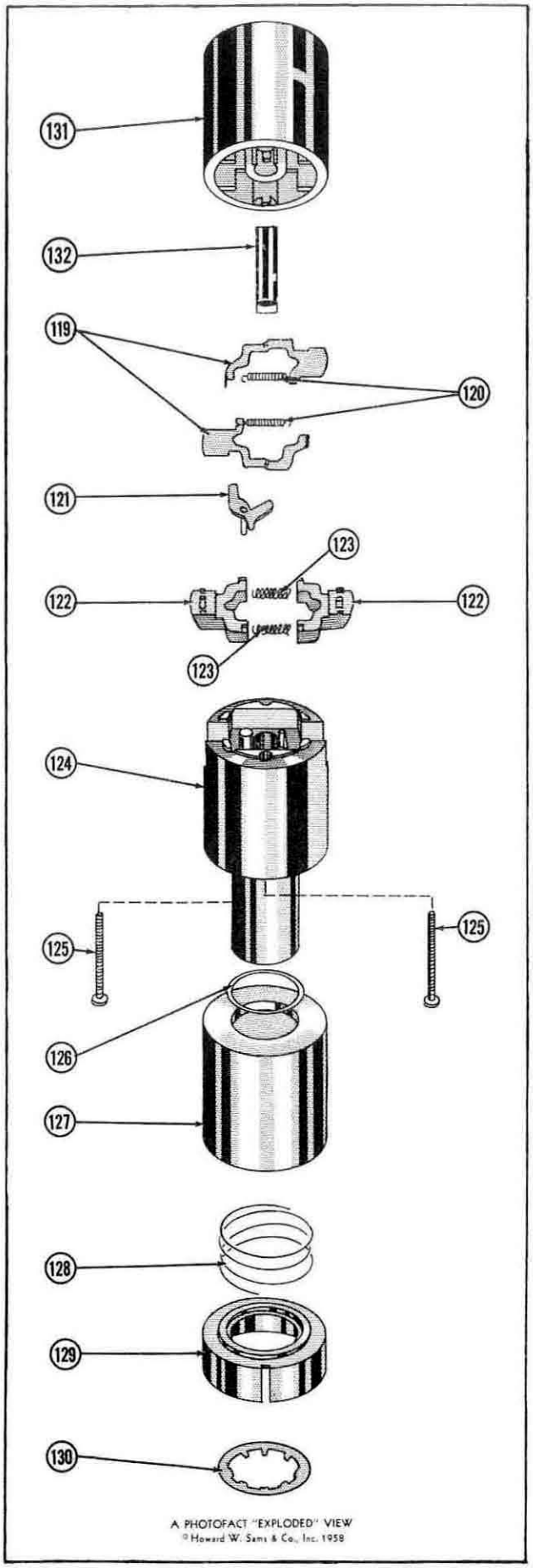
The set-down position of the needle is adjusted by means of the set-down adjustment screw (20A) mounted on the hinge arm assembly (20). Turn this screw adjusting pick-up arm for correct set-down on a 10" record. When the correct set-down is obtained for the 10" position, the 12" and the 7" needle set-down will also be correct.

Pick-Up Arm Height (Refer To Figure 3)-

The pickup arm height is adjusted by the lift screw (101). To raise the height of the pick-up arm, turn this screw counter clockwise. To lower the pick-up arm, turn clockwise. The pick-up arm height should be adjusted so that with a 1 1/8" stack of records on the turntable the pick-up arm lifts 1/4" straight up as the change cycle starts.

Needle Pressure (Refer To Figure 3)-

The needle pressure should be between 8 and 10 grams. Adjustment is made by placing weight adjusting spring (103) in the slots, on the underside of the pick-up arm, which give the desired pressure.



EXPLODED VIEW OF 45 R.P.M. SPINDLE

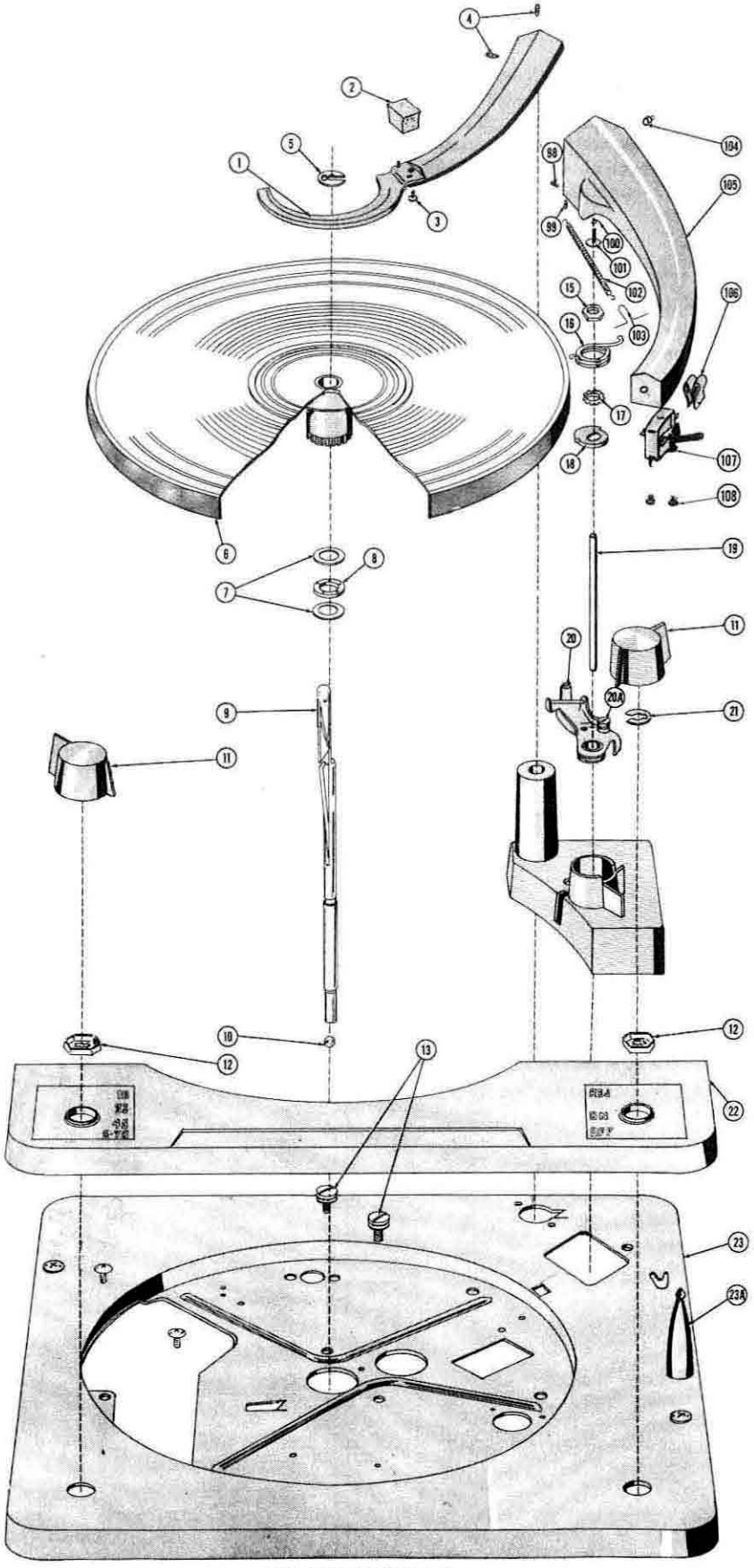


FIGURE 8A. EXPLODED VIEW OF PARTS ABOVE BASEPLATE.

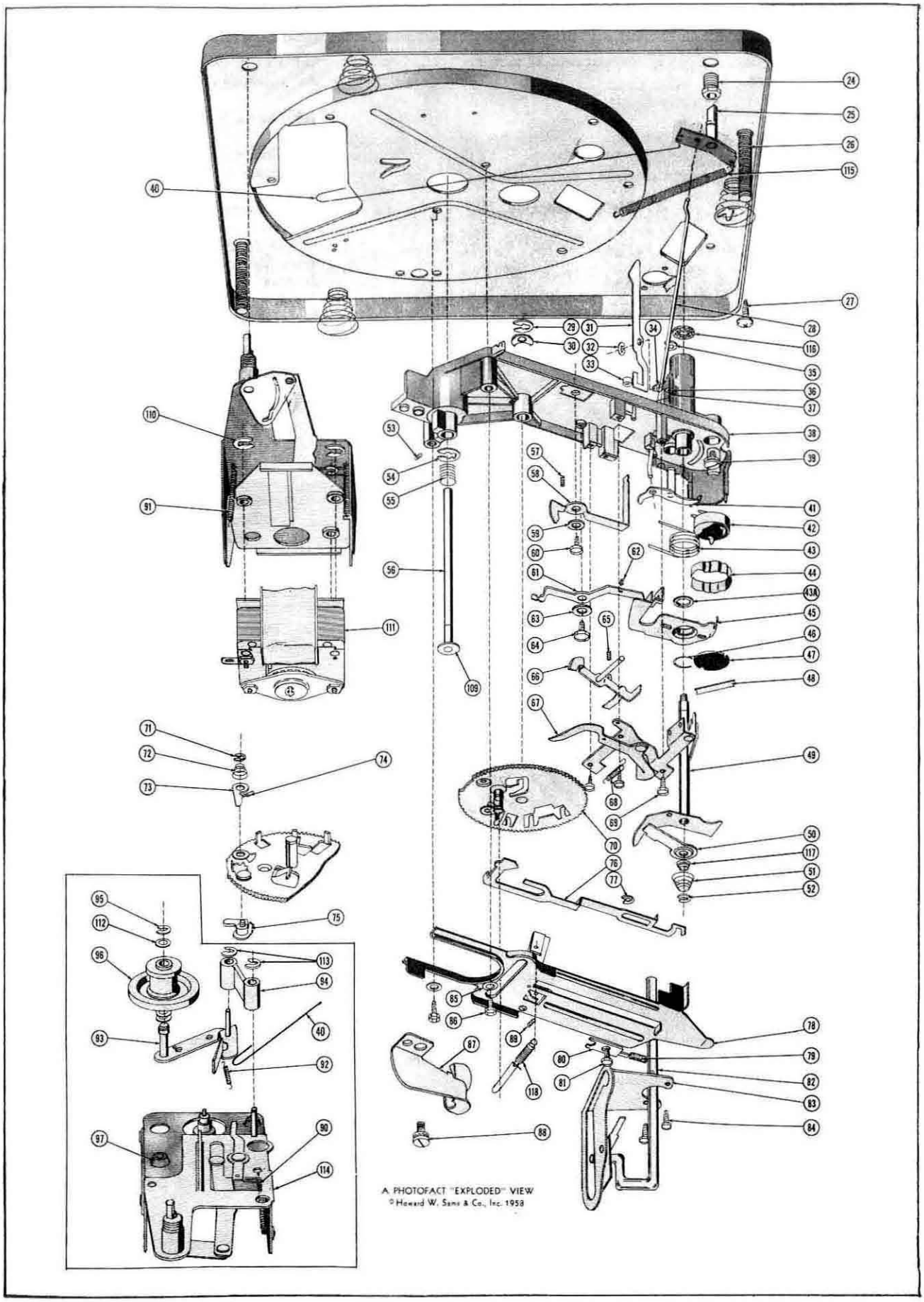


FIGURE 8B. EXPLODED VIEW OF PARTS BELOW BASEPLATE

TROUBLE CHART

SYMPTOM	CAUSE	REMEDY
Turntable does not revolve when control is turned "On".	1. No current at motor.	(a) Check that current is reaching AC leads of changer. (b) Check that switch is closing. (c) Check wiring and soldered terminals in the changer.
	2. Motor defective.	(a) Remove turntable to allow motor to operate without load. If current is reaching motor and drive spindle does not rotate, the motor is defective. Repair or replace.
	3. Motor idler wheel not engaging turntable rim.	If drive spindle is turning but turntable is not: (a) Check motor idler assembly to determine if it is free to contact the drive spindle and turntable rim. (b) Wipe off inside rim of the turntable (6) to remove flock, or if oily, clean the turntable rim and rubber tire of the idler wheel with naptha or alcohol.
	4. Motor not in detent completely.	Check speed change slide for freedom of operation.
Changer does not cycle when the control knob is turned to the "Rej".	1. The manual reject not actuating the trip.	(a) Turn the control knob (11) to the reject position, hold and see that the control shaft assembly (41) has moved the trip link (76) to the rear. This should actuate the trip pawl on the main gear (70) which will bring the spur on the trip pawl in contact with the hub gear on the turntable hub. (b) Check for binding of the pawl lever (73), the trip lever assembly (75) and the trip pawl. If binding occurs, clean out all foreign matter and check for freedom.
Control knob cannot be turned to "On" position.	1. Machine shut off during cycle.	Turn the turntable clockwise, by hand, until the control knob (11) is free.
Pickup arm strikes records on spindle when it raises, or pickup arm rest when it moves out.	1. Pickup arm height not adjusted properly.	(See instructions for adjusting pickup arm height under "Adjustments").
Turntable speed too slow (refer to exploded view).	1. Binding in turntable bearing.	Check the turntable bearing for freedom. Hold the motor idler wheel out of engagement with the turntable and spin the turntable, by hand, to see if it turns readily and coasts for a long time. If binding occurs, remove turntable, clean off foreign matter, and lubricate with light mineral oil.
	2. Line voltage too low.	The line voltage should not be less than 105 volts or the turntable may be too slow.
	3. Operating temperature too low.	If the machine has been stored in a cold place or operated in surround-

SYMPTOM	CAUSE	REMEDY
		ings at a temperature of less than 60° F., the turntable speed may be too slow.
Turntable stalls or slows down during cycle refer to exploded view.	1. Motor idler not engaging turntable.	(See "Turntable Does Not Revolve When Control Knob is Turned to "On" Position").
	2. Binding in drive mechanism.	Hold idler away from turntable, or remove idler wheel. Cycle machine by turning turntable slowly by hand. The main gear should turn freely for the complete revolution without binding at any point. (a) If binding occurs, check for foreign matter in the gear teeth, a bent gear bearing, or bent spindle bushing. Straighten or replace. Clean lubricate.
	3. Binding between pickup arm lift pin (19) and lift pin cam surface on slide and cam assembly.	Lift pin should ride freely on cam surface without binding.
	4. Motor weak.	When everything checks all right, but the changer still stalls in cycle, the motor may be weak.
	5. Grease on idler wheel.	1. Wipe off idler wheel rubber tire; inner rim of turntable and rubber belts with naptha or alcohol.
	6. Idler wheel tension spring weak.	Replace spring or bend motor tension spring anchor bracket to give desired tension.
Changer continues to cycle.	Reject mechanism binding.	(a) Make certain the trip link (76) is not frozen in the reject position. (b) Make certain the changer control lever (41) is not binding and that it actuates the trip link (71) when the changer control knob (11) is turned to reject. (c) Check for binding of trip pawl, trip lever (75) and pawl lever (73); these must be free to turn easily. (d) Check the changer control linkage, (28) and (41).
Noise during playing of record.	1. Motor rumble.	If a low-pitched rumbling sound comes from the loud speaker while a record is being played, check motor grommets to be sure the motor is freely suspended on them. The motor lead wires should have slack to allow the motor to float. Motor rumble may also come from an unbalanced motor rotor; in this case, replace the motor.
	2. Defective turntable bearings (8).	Defective turntable bearings can cause rumble. Check for foreign matter in the bearing, defective balls, binding between balls and

SYMPTOM	CAUSE	REMEDY
		ball retainer; rough surface on washers. Clean ball bearing, sleeve bearing, and washers; lubricate with light mineral oil.
	3. Defective motor idler wheel.	A rapid thumping sound while the motor is running may indicate a flat spot on the motor idler wheel. If this condition does not clear up after ten minutes of running time, remove the turntable and check the rubber tire on the idler. If the surface of the rubber tire is not smooth and even, replace the part. Should the bearing of the idler wheel show signs of excessive wear or be extremely wobbly, the idler wheel should be replaced.
	4. Defective record.	Worn or defective records cause needle scratch and distortion of the recorded sound. If the record is warped, it may slip on the other records causing "Wow" (a waver in the recorded sound). An enlarged hole in the record can also cause "Wow".
	5. Turntable scrapes.	If a scraping sound occurs as the turntable revolves, check: (a) Turntable warped, causing outer rim to rise and fall. (b) Motor idler or mounting plate bent.
	6. Squeaks.	Squeaking sound as changer operates indicates lack of oil. Lubricate points indicated under "Lubrication".
	7. 7" lever (58) loose.	Check 7" lever washer (59) and screw (60) to see if they are tight.
Distortion of recorded sound.	1. Defective record.	(See "Noise During Playing of Record").
	2. Defective amplifier.	Check phonograph amplifier and speaker.
	3. Bad cartridge.	Replace.
	4. Bad Needle.	Replace.
No Sound During Playing.	1. Defective cartridge.	Replace. (See "Defective Cartridges").
	2. Defective wiring.	Check pickup leads for a shorted or open lead.
	3. Defective amplifier.	Check phonograph amplifier and speaker.
	4. Loose cartridge terminal clips.	Remove, squeeze together slightly, and replace.
Excessive record wear.	1. Binding on pickup arm.	(See "Needle Does Not Track Across Record Properly").

SYMPTOM	CAUSE	REMEDY
Changer does not shut off after last record has been played (refer to exploded view).	1. Record support binding (1).	The record support must drop below the off-set shoulder of the spindle or the changer will not shut off. (See "Two Records Drop at Once").
	2. Lever assembly binding (66).	Clean out dirt and make sure this operates smoothly.
	3. Shut-off bracket binding.	Check bracket and if bent, straighten.
	4. Shut off lever not engaging locator.	Adjust tab on slide that rotates the locator and trip finger when unit is cycling.
Rough pickup arm motion.	1. Horizontal defects.	(a) Check pickup arm return locator (45) for tightness. (b) Check that pickup arm return spring (43) is not weak and is hooked up properly. (c) Check that fiber washer (43A) is installed under pickup arm return locator.
	2. Vertical defects.	(a) Lift pin (19) binding; clean out dirt and lubricate. (b) Slide and cam (78) binds; check bearing points -- clean and lubricate. (c) Burrs in main slot in slide and cam (78) -- remove with fine file. (d) Ejector lever on ejector bracket assembly (87) binding straighten, remove burrs, and lubricate. (e) Pickup arm shaft and sleeve binding; clean and lubricate.
Noisy during change cycle.	1. Tines on the forked end of the slide and cam assembly (78) bent.	Replace.
	2. Lack of lubrication. Grinding noise.	Lubricate ejector lever (87) where it contacts lower end of spindle (56).
Control knob does not detent on "33", "45", or "78" positions.	1. Detent spring off or broken.	Replace.
Cartridge drags on record.	Needle bent.	Replace needle.
	Cartridge mounting screws loose.	Tighten.
Shuts off when last record drops.	1. Shut-off bracket (83) bent.	Straighten or replace.
	2. Record support bent.	Bend down slightly so record support (1) is parallel with the baseplate.
	3. Loose shut-off lever assembly (66).	Tighten.
Will not play manually.	1. Trip link, (76) bent.	Straighten or replace.
	2. Trip finger cam (49) bent.	Straighten or replace.
Impossible to adjust set-down.	1. Pickup arm shaft and sleeve assembly (49) defective.	Shift the safety plate (18) toward the eccentric set-down adjusting screw

SYMPTOM	CAUSE	REMEDY
		(20A), and tighten pickup arm shaft and sleeve nut (15). Hold pickup arm against rear stop and push on trip finger cam (49). The safety plate (18) should move away from the set-down adjusting screw (20A) and snap back when the trip finger cam (49) is released; if it does not, replace the pickup arm shaft and sleeve assembly (49). Hinge pivot screws may be adjusted favoring one side or the other.
Record does not drop when changer cycles.	1. Spindle pusher shaft (56) broken, or bent.	Replace push shaft (56).
	2. Record finger in spindle not moving far enough forward to eject a record.	The record finger should move forward until it has reached a point flush with, or a maximum of, .010" beyond the spindle body (9). To insure that the record finger is all the way forward, push rod (56) should be raised high enough by the ejector lever to slightly compress the pusher spring. (See "Turntable Stalls During Cycle"). If the spring is compressed and the record finger does not move far enough forward to eject a record, the spindle (9) should be replaced. If a record is not pushed completely off the ledge it may hang on the spindle momentarily, then drop on the pickup arm when it moves in over the turntable.
	3. Check that ball bearing (10) is not missing.	Replace.
Two records drop at once.	1. Hole in record too large.	Check the diameter of the hole in the record. An oversize hole will cause two records to drop at once.
	2. Spindle guide not fully down.	If the spindle guide is not all the way down, more than one record may be dropped at a time. (a) Check the guide to be sure it is free and does not bind at any point. Clean out foreign matter of straighten if necessary. Do not oil. (b) When records are placed on the spindle, be sure the guide is all the way down. The guide will normally raise as a record is being dropped, but it should return to place immediately, by gravity.
	3. Record pusher (56) defective.	The record pusher (56) may be deformed, etc. This may cause two records to drop at once. Replace with new pusher or replace spindle assembly.
	4. Slight play in spindle (9).	Tighten spindle set screw (53).
Record hits pickup arm (refer to exploded view).	1. Record finger not moving far enough forward to eject record.	(See "Record Does not drop when changer cycles"-2).

TROUBLE CHART – CON'T.

SYMPTOM	CAUSE	REMEDY
	2. Record finger extending beyond outside diameter of spindle.	Cycle changer, by hand, until pusher shaft (56) is at the top of its travel. Using new record as a guage, pass it over the spindle to see if it binds at any point. File off high points on record finger with a fine file, until record will pass freely over spindle.
	3. Pickup arm not adjusted properly.	(See "Adjustments").
Needle does not set down on 10" record in proper position (refer to exploded view).	1. Pickup arm not adjusted properly.	(See "Adjustments"). (a) Loose nut (15) on pickup arm shaft and sleeve (49).
	2. Pickup arm shaft and sleeve (49) binding.	File off burrs and rough surfaces. Polish and lubricate shaft.
	3. 7" set-down lever (58) and 12" record selector (31) not operating properly.	Insure that the proper operation and reset of the 7" set-down lever (58) and 12" record selector (31) is not being interferred with.
	4. Needle bent.	Replace with new needle.
	5. Wire spring broken.	12" record selector (31) does not cock; check for broken 12" record selector spring (37).
	6. Bent pickup arm return locator (45).	Straighten or replace.
	7. Bent trip finger cam (49).	Straighten or replace.
Needle does not set down on 12" record in proper position (refer to exploded view).	1. Diameter of 12" record undersize.	The set-down position of the needle for 12" records is determined by the edge of the record striking the 12" record selector (31). If a 12" record has a diameter of less than the standard size of 11-7/8" plus or minus 1/32", it may fail to depress the 12" record selector far enough.
	2. Enlarged center hole in record.	An enlarged center hole might fail to set the 12" record selector because it could produce the same effect as a small record.
	3. Pickup arm not adjusted properly.	(See "Adjustments"). Page 8.
	4. Binding of pickup arm shaft and sleeve (49).	Clean and polish shaft (49) and lubricate with light oil.

PARTS LIST MODELS 1200-1200A

Ref. No.	Part No.	Description
1	*15255	Record Support Assy. Complete Models 1200-1200A
	*15253	Record Support Assy. Complete Models 1210-1210A
2	*6864	Knob - Models 1200-1200A
	*2903	Button Models 1210-1210A
3	6927	Screw - Knob, Models 1200-1200A Only
4	14603	Set Screw
5	1650	"C" Washer
6	*9455	Turntable Assy.
7	6877	Bearing Washers
8	6876	Ball Bearing Retainer

Ref. No.	Part No.	Description
9	6049	Spindle Shaft
10	6884	Ball Bearing
11	*6918	Control Button
12	2257	Pal Nut - Models 1200-1200A
	8398	Pal Nut - Models 1210-1210A
13	9823	Screw
14	6929	Screw #8-32 x 3/16 B.H.M.S.
15	14498	Keps Nut
16	4937	Safety Spring
17		Lockwasher - Part of Item 15
18	4339	Safety Plate
19	4327	Lift Pin

Ref. No.	Part No.	Description
20	4072	Hinge Arm Assy.
20A		Set Down Adj. Screw - Part of Item 20
21	1719	"C" Washer
22	*6920	Escutcheon - Models 1200-1200A
23	*6935	Baseplate - Models 1200-1200A
	*9594	Baseplate - Models 1210-1210A (Also Specify Color of Printing)
23A	*5573	Rest Post
24	6916	Control Bushing
25	7114	Control Lever-Replaced 6936 in Models 1200, 1210
26	9850	Mounting Bolt
27	2916	Screw - Rest Post
28	6919	Reject Rod
29	1719	"C" Washer
30	9762	Spring Washer
31	2957	12" Record Selector
32	1588	"C" Washer
33	2580	Rubber Bumper
34	4172	Compression Spring
35	1652	"C" Washer
36	1720	Speed Nut
37	2563	Spring - 12" Selector
38	6968	Die Case Frame
39	9823	Screw
40	7112	Retraction Rod - Models 1200A, 1210A
41	2284	Control Shaft Assy.
42	467	Switch
43	9533	Return Spring - Pickup Arm
43A	4950	Fibre Washer - Part of Item 45
44	2931	Fibre Insulating Strip
45	6405	Locator & Bushing Assy.
46	5828	Retaining Ring - Locator
47	2573	Switch Cover
48	4212	Retainer - Switch Cover
49	9565	Trip Finger Cam & Shaft Assy.
50	9557	Retard Lever
51	9509	Lift Pin Spring - Used With Aluminum Tone Arms
	14551	Lift Pin Spring - Used With Zinc Tone Arms
52	1588	"C" Washer
53	6955	Set Screw #8-32X1/4
54	5022	"C" Washer
55	6885	Safety Spring
56	6874	Push Rod
57	2579	Spring - 7" Set Down Lever
58	2581	7" Set Down Lever
59		Flat Washer - Part of Item 60
60	9849	Screw #6-32X5/16 Washer Head
61	6007	Reset Lever
62	2925	Spring - Reset Lever
63		Flat Washer-Part of Item 64
64	9849	Screw #6-32X5/16 Washer Head
65	9663	Spring-Shut off Lever
66	6966	Shut Off Lever Assy.
67	9786	Retard & Clip Assy.
68	6880	Spring-Retard Arm
69	6713	Screw #4-40 Hex Head
70	7125	Gear Assy. - Replaced 6967 in Models 1200, 1210
71	1588	"C" Washer
72	4172	Spring
73	5339	Pawl Lever
74	5338	Pawl Spring
75	2569	Trip Lever Assy.
76	4656	Trip Link
77	1588	"C" Washer
78	7121	Slide Assy. - Replaced 6970 in Models 1200, 1210
79	2246	Spring-Slide Bearing
80	2211	Slide Bearing
81	9849	Screw #6-32X5/16 Washer Head
82	6897-	Record Support Shaft
83	6931	Record Support Guide Assy.
84	4857	Screw-#6-32X3/8
85		Flat Washer - Part of Item 86
86	9849	Screw-#6-32X5/16 Washer Head
87	14420	Ejector Bracket-Replaced 6953 on Previous Models
88	9823	Screw 10-24 x 5/16
89	2585	Spring Escape Lever
	6950	Motor Assy. Complete, General Industries, 110V 60 Cycles - 2 Pole
	6021	Motor Assy. Complete, Alliance, 110V 60 Cycles - 2 Pole
	15190	Motor Assy. Complete, General Industries, 110V, 60 Cycle, 4 Pole
90	6947	Detent Spring - All Motors
91	6948	Counter Balance Spring - 6950, 15190
	7434	Counter Balance Spring - 6021
92	6949	Idler Spring - 6950
	7439	Idler Spring - 6021
	9330	Idler Spring - 15190
93	6937	Idler Arm Assy. - 6950
	7438	Idler Arm Assy. - 6021
	9033	Idler Arm Assy. - 15190
94	6901	Idler Link - 6950 - 15190
	7437	Idler Link - 6021
95	1652	"C" Washer - all Motors
96	9092	Idler Wheel - 6950
	7435	Idler Wheel - 6021
	9032	Idler Wheel - 15190
97	6631	Grommet - All Motors
98	4923	Pivot Screw
99		
100	7634	Lock Spring
101	7635	Lift Screw
102	6964	Hinge Spring - Aluminum Tone Arm
	14534	Hinge Spring - Zinc Tone Arm
103	6965	Weight Adjusting Spring
104	4922	Hinge Pivot Button
105	*7488	Tone Arm - Aluminum
	*14516	Tone Arm - Zinc
106	6963	Tone Arm - Clip
107	7316	Cartridge - Sonotone 2TS 7317 Needle & Lever Assy.
108	9074	Screw #2-56X1/8 - Aluminum Tone Arm
	18427	Screw #2-56X5/32 Zinc Tone Arm
109	6883	Thrust Washer
110	5022	"C" Washer - All Motors
111	9134	Motor Plate-Stud Assy.-6950-6021
	16554	Motor Plate & Stud Assy. - 15190
112	2583	Fibre Washer - All Motors
113	1652	"C" Washer - All Motors
114	6944	Motor Plate Assy., 6950, 6021
	9518	Motor Plate Assy. - 15190
115	7113	Reject Spring, Models 1200A, 1210A. Reject Spring in 1200, 1210 is hooked to Item 41
116	2952	Fibre Washer
117	9510	Anti Skate Spring
118	7120	Detent Spring & Link Assy. Models 1200A, 1210A
	*9759	45 RPM Spindle - New Type
119	6089	Separator Blade
120	6092	Blade Return Spring
121	6102	Actuator Lever Assy.
122	6088	Spindle Bolt
123	6093	Bolt Return Spring
124	*6087	Spindle Body
125	14646	Screw #4-24X1"
126	6094	Fibre Washer
127	*6096	Rotor
128	5068	Spring - Rotor Lift
129	6095	Rotor Lift
130	6099	Retainer
131	*9413	Spindle Cap
132	6097	Spindle Clamp

WHEN ORDERING PARTS PRECEDED WITH ASTERISKS (*), SPECIFY COLOR.

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V-M MODEL 1200B & 1210B BASIC RECORD CHANGER PARTS LIST

REFERENCE NUMBERS REFER TO V-M 1200A SERVICE MANUAL (FORM #1017).

REF. NO.	PART NO.	DESCRIPTION
1		RECORD SUPPORT ASSY. (COMPLETE)
2		KNOB, RECORD SUPPORT BUTTON, RECORD SUPPORT (NOT CALLED OUT IN MANUAL BUT GENERALLY USED ON 1210B SERIES)
3	6927	SCREW, RECORDS SUPPORT KNOB (NOT REQ'D WITH BUTTON)
4	14603	SET SCREW
5	1650	"C" WASHER (TURNTABLE RETAINER)
6		TURNTABLE ASSY.
7	6877	BEARING WASHER
8	6876	BALL BEARING RETAINER
9	6049	SPINDLE SHAFT
10	6884	SPINDLE BALL
11		CONTROL KNOB
12	2257	PAL NUT (USED WHEN 6920 ESCUTCHEON IS USED)
	8398	PAL NUT (USED WHEN NO ESCUTCHEON IS USED)
13	9823	SCREW
14	6929	SCREW
15	14498	KEPS NUT
16	4937	SAFETY SPRING
18	4339	SAFETY PLATE
19	4327	LIFT PIN
20	4072	HINGE ARM ASSY.
21	1719	"C" WASHER
22		ESCUTCHEON (GENERALLY USED ON 1200B ONLY)
23		BASEPLATE ASSY.
23A		REST POST
24	6916	CONTROL BUSHING
25	7114	CONTROL LEVER ASSY.
26		MOUNTING BOLT
27	2916	SCREW (REST POST MTG.)
28	6919	REJECT ROD
29	1719	"C" WASHER
30	9762	SPRING WASHER (GEAR MTG.)
31	2957	12" RECORD SELECTOR
32	1588	"C" WASHER
33	2580	RUBBER BUMPER
34	4172	COMPRESSION SPRING
35	1652	"C" WASHER
36	1720	SPEED NUT
37	2563	SPRING, 12" RECORD SELECTOR
38	15451	DIE CAST FRAME ASSY.
39	9823	SCREW
40	7112	RETRACTION ROD
41	2284	CONTROL SHAFT ASSY.
42	467	A.C. SWITCH
43	9533	RETURN SPRING
44	2931	FIBRE INSULATING STRIP

REF. NO.	PART NO.	DESCRIPTION
45	6405	LOCATOR & BUSHING ASSY.
46	5828	RETAINER RING
47	2573	SWITCH COVER
48	4212	RETAINER (SWITCH COVER)
49	15450	TRIP FINGER CAM & SHAFT ASSY.
50	9557	RETARD LEVER
51	14551	LIFT PIN SPRING
52	1588	"C" WASHER
53	6955	SET SCREW
54	5022	"C" WASHER
55	6885	SAFETY SPRING
56	6874	PUSH ROD
57	2579	SPRING, 7" SET DOWN LEVER
58	2581	7" SET DOWN LEVER
60	9849	SCREW
61	6007	RESET LEVER
62	2925	SPRING (RESET LEVER)
64	9849	SCREW
65	9663	SPRING, SHUT OFF LEVER
66	6966	SHUT OFF LEVER ASSY.
67	18637	RETARD ASSY.
68	16817	SPRING, RETARD ARM
69	6713	SCREW
70	7125	GEAR ASSY.
71	1588	"C" WASHER
72	4172	SPRING
73	5339	PAWL LEVER
74	5338	PAWL SPRING
75	2569	TRIP LEVER ASSY.
76	4656	TRIP LINK
77	1588	"C" WASHER
78	7121	SLIDE ASSY.
78A	4005	ESCAPE LEVER
79	2246	SPRING, SLIDE BEARING
80	2211	SLIDE BEARING
81	9849	SCREW
82	6897	RECORD SUPPORT SHAFT
83	6931	RECORD SUPPORT GUIDE ASSY.
84	4857	SCREW
86	9849	SCREW
87	14420	EJECTOR BRACKET
88	9823	SCREW
89	2585	SPRING (ESCAPE LEVER)
		MOTOR ASSY. (COMPLETE)
90		DETENT SPRING
91		COUNTER BALANCE SPRING
92		IDLER SPRING
93		IDLER ARM ASSY.
94		IDLER LINK
95		"C" WASHER
96		IDLER WHEEL
97	6631	MOTOR MOUNTING GROMMET
98		PIVOT SCREW
100		LOCK SPRING
101		LIFT PIN
102		HINGE SPRING

REF. NO.	PART NO.	DESCRIPTION
103		WEIGHT ADJ. SPRING
104		HINGE PIVOT BUTTON
105		TONEARM
106		TONE ARM CLIP
107		CARTRIDGE
		NEEDLE
		NEEDLE GUARD
108		CARTRIDGE SCREW
109	6883	THRUST WASHER
110	5022	"C" WASHER
111		MOTOR ONLY
112	2583	FIBRE WASHER
113	1652	"C" WASHER
114		MOTOR PLATE ASSY.
115	7113	REJECT SPRING
116	2952	FIBRE WASHER
117	9510	ANTI SKATE SPRING
118	7120	DETENT SPRING & LINK

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